



CITY OF ANN ARBOR, MICHIGAN
POSITION DESCRIPTION

SCADA Network Specialist

Job Code: 405070	
Service Area: Public Services	
Service Unit: Water Treatment Services	
Salary Grade (Non-Union): 9	Pay Scale (Union): N/A CP: No
Exemption Status: Exempt	
Accountable To: WTP SCADA Network Administrator	
Union/Non-Union: Non-Union	
Union Name: N/A	
Essential Driver: Yes	
Telecommuting Eligible: Hybrid	
Responsible for supervising the following positions: Applicable temporary staff and/or interns	
Description Prepared By M. Maciejewski 5/2026 HR Review – BM, CW 6/2026 Legal Review – MR 7/24/2026	

Date Position Description Finalized

7/24/2026

Role Summary

Evaluate, install, test, support, maintain, and improve the Process Information Control System (PICS) in the water treatment plant, distribution system facilities, and dams for the City of Ann Arbor, as directed by the SCADA Network Administrator and/or other Water Treatment Services Unit (WTSU) management. This includes Supervisory Control and Data Acquisition (SCADA) software management and configuration, programmable logic controller (PLC) programming, local human machine interface (HMI) programming, network support, database management, PLC and SCADA hardware oversight and troubleshooting of all system components and related signals. Provide training, consultation, and direction to treatment plant staff on the use and application of installed control systems. Works with treatment plant staff, other City departments, and 3rd party firms on projects, improvements, data collection, and other tasks related to the SCADA system and its functions.

Duties

Duties are performed under the general supervision of the SCADA Network Administrator or designee and may include the following:

Essential Duties

- Supports the SCADA Network Administrator through assistance with the oversight, design, monitoring, and implementation of SCADA system hardware, software, and programming, and as directed through responsibilities and activities listed below.
- Reviews, implements, and enforces overall system security features and cybersecurity policies on SCADA platforms.
- Recognizes and identifies potential areas where existing processes and procedures could be improved, or where new automation solutions can be developed and implemented.
- Integrates new devices or processes into the existing SCADA system as identified by SCADA Network Administrator.
- Interprets operation descriptions into PLC ladder logic and SCADA user interface designs as directed.
- Supports all aspects of the software and hardware related to the SCADA system including software installation, software programming and revisions, and hardware replacement during business hours and occasional after hours emergency response.
- Provides expertise to support and/or fully perform efforts to specify, design, program, revise and maintain PLC, SCADA, and HMI systems.
- Defines needs, identifies resources, develops programs, conducts and administers training for system users.
- Initiates corrective action and provides guidance to resolve network, system, cybersecurity or data error issues.
- Performs firmware updates, software updates, software backups and other system maintenance duties.
- Act as liaison for end users of system hardware and software to report and resolve problems.
- Develops and maintains system user manuals, standard operating procedures (SOP's), sequence of operations documentation, and emergency response plans.

Related Work

- Supports technology improvement and troubleshooting efforts with the City Information Technology Services Unit (ITSU).
- May exercise functional supervision over designated staff including temporary staff and interns.
- Manage special projects; lead team members to evaluate, propose, and implement new systems hardware and software configurations.
- Assist with WTP cybersecurity planning and implementation, physical security system review, and emergency response planning.
- Provides support for PLC and SCADA portions of construction projects including document review, verification of intended operation, and startup assistance.
- This position will require occasional travel to dams and other facilities
- Performs other duties as assigned.

Knowledge of: (position requirements at entry)

- Allen Bradley ControlLogix (Studio 5000) software and related software packages including FactoryTalk Linx, FactoryTalk Activation Manager, FactoryTalk Administration Console, and ControlFlash Plus(or equivalent)
- Microsoft Operating System setup and configuration
- VTScada by Trihedral SCADA software (or equivalent)
- Basic knowledge of graphic design for control systems (including the use of both traditional and high-performance graphics) Experience in troubleshooting computer network hardware and software applications
- Basic knowledge of common controls devices and their use within industrial controls applications; including flowmeters, pressure transducers, level transmitters, valve actuators, and process controllers

Skills and Ability to:(position requirements at entry)

- Effectively communicate through oral and written instruction
- Work independently and as part of a team
- Work effectively with people from many different disciplines with varying degrees of technical expertise in all organizational levels
- Read and interpret technical manuals
- Navigate and understand control panel wiring diagrams, electrical one-line diagrams, and other similar schematics
- Troubleshoot software, hardware and network problems with and without technical support assistance
- Install and maintain computer hardware and software applications
- Provide after hours response to support software, hardware, network and communications issues and other system outages and emergencies both remotely and in person, as needed
- Ability to solve problems using sound judgement with an emphasis on safety and regulatory compliance
- Meet deadlines in a timely and accurate manner
- Write and assemble complete, clear, and concise training documentation, technical specifications, and related reports and materials

- Demonstrate proficient use and understanding of office technology, including the use of computers and software applications (e.g. Microsoft Office Applications, and Microsoft Windows configuration and settings)
- Demonstrate proficient use and understanding of automation technology, including the use of computers and software applications (e.g. PLC Programming Software, SCADA development software) and the basic understanding of common communications drivers and protocols (Ethernet, Modbus, OPC, JSON)

Equipment

- Computing and office equipment including desktop computer, laptop, servers, and printers/copiers.
- Use and wear all required Personal Protective Equipment where appropriate.
- Basic understanding of Instrumentation and Control startup and testing tools including multimeter, signal generator, and Ethernet network testing and termination equipment.
- Basic understanding of networking equipment including managed network switches, firewalls, and media converters.

Education, Training and Experience (position requirements at entry)

Required:

- Bachelor's degree in Computer Science, Information Technology, Electrical Engineering, Mechanical Engineering or related fields.
- 2+ years of experience with PLC programming and/or Supervisory Control and Data Acquisition (SCADA) System development
- The City of Ann Arbor will consider an alternative combination of education and experience.

Preferred:

- 1-3 years of experience with water treatment system controls is desirable
- 1-3 years of experience in control system hardware or software design, graphical interface design, or PLC/SCADA system design, integration, startup, or commissioning
- Equivalent combination of education and experience may be considered

Licensing Requirements (position requirements at entry)

Valid driver's license

Physical Requirements

The physical ability to perform driving, climbing, balancing, stooping, kneeling, crouching, crawling, reaching, standing, walking, pushing, pulling, lifting, grasping, feeling, talking, hearing, seeing, and repetitive motions.

The physical ability to safely operate a motor vehicle, as incumbent may be required to travel to various facilities.

Essential duties require the mental and/or physical ability to: work in a standard office environment; read fine print on electrical schematics, electronics and other hardware and on display screens of varying sizes; converse by telephone, two-way radio, in person, or around the noise of heavy construction equipment; move across rough terrain and bridge scaffolding; climb into and out of sewers and trenches, confined space entry, climb ladders, and several flights of

stairs; use hand tools, electronic testing equipment, and personal computers; and strength to lift and carry up to fifteen (15) pounds. The work requires the ability to distinguish colors and the status of small indicating lights, and to hear audible alarms. Incumbents may be subject to potentially hazardous physical conditions, atmospheric conditions, extreme temperatures, intense noise, and/or vehicle traffic.

Heavy Work: Exerting up to fifteen (15) pounds of force rarely, and/or up to ten (10) pounds of force infrequently, and/or up to five (5) pounds of force occasionally, and/or a small amount of force constantly to move objects.

The physical demands described here are representative of those that may be met by an employee to successfully perform the essential duties of this position. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential duties.